



40 dB Gain, 1.5 dB NF, 15 dBm P1dB, 1.2 GHz to 1.4 GHz, Low Noise High Gain Amplifier SMA

TECHNICAL DATA SHEET

PE15A1005

PE15A1005 is an L-band high gain low noise coaxial amplifier operating in the 1.2 to 1.4 GHz frequency range. The low noise amplifier offers 15 dBm min of P1db and high 40 dB typical small signal gain with gain flatness of ± 0.75 dB typical. This excellent technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The low noise amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -40°C and $+85^{\circ}\text{C}$.

Features

- 1.2 GHz to 1.4 GHz Frequency Range
- P1dB: 15 dBm min
- Small Signal Gain: 40 dB min
- Gain Flatness: ± 0.75 dB typical
- Noise Figure: 1.5 dB max
- 50 Ohm Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications

- L-band Military Radar
- Commercial Air Traffic Control
- Weather & Earth Observation Satellites
- Radar & Communication Systems
- High Gain Low Noise Amplifier

Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Volts, DC Current = 200mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	1.2		1.4	GHz
Small Signal Gain	40			dB
Gain Flatness		± 0.75	± 1	dB
Gain Variance at OTR*			± 1.8	dB
Output at 1 dB Compression Point	+15			dBm
Noise Figure			1.5	dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	10.8	12	13.2	Volts
Operating DC Current		200	250	mA
Operating Temperature Range	-40		+85	$^{\circ}\text{C}$

*OTR= Base Plate Operating Temperature Range

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [40 dB Gain, 1.5 dB NF, 15 dBm P1dB, 1.2 GHz to 1.4 GHz, Low Noise High Gain Amplifier SMA PE15A1005](#)



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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-40 to +85	°C
Storage Temperature	-55 to +85	°C



ESD Sensitive Material,
Transport material in
Approved ESD bags.
Handle only in approved
ESD Workstation.

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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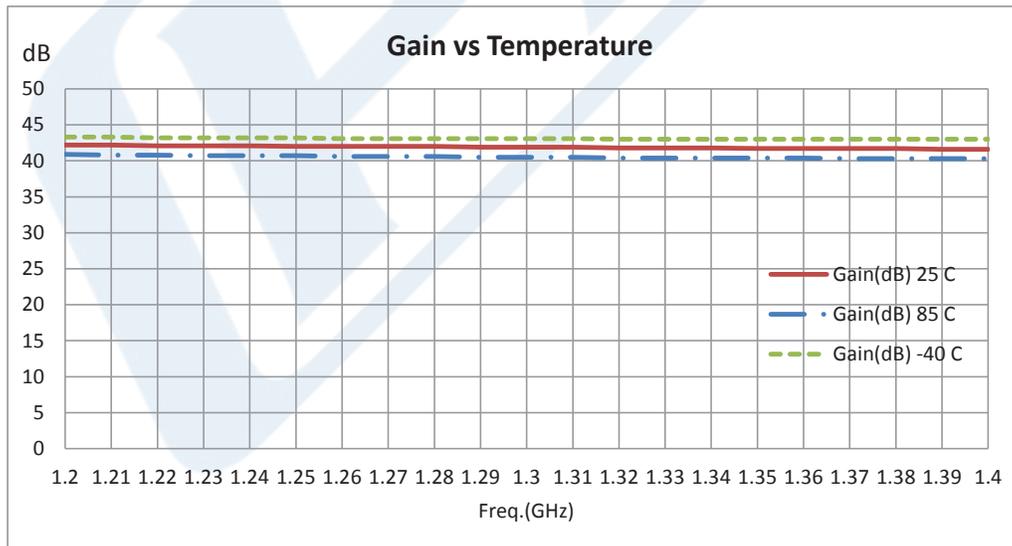
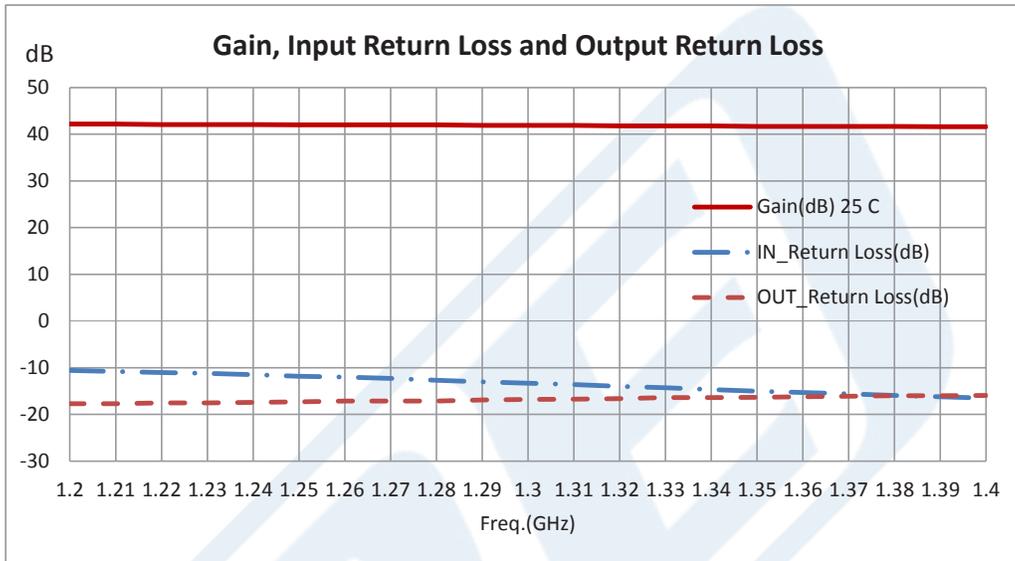


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Typical Performance Data



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40 dB Gain, 1.5 dB NF, 15 dBm P1dB, 1.2 GHz to 1.4 GHz, Low Noise High Gain Amplifier SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

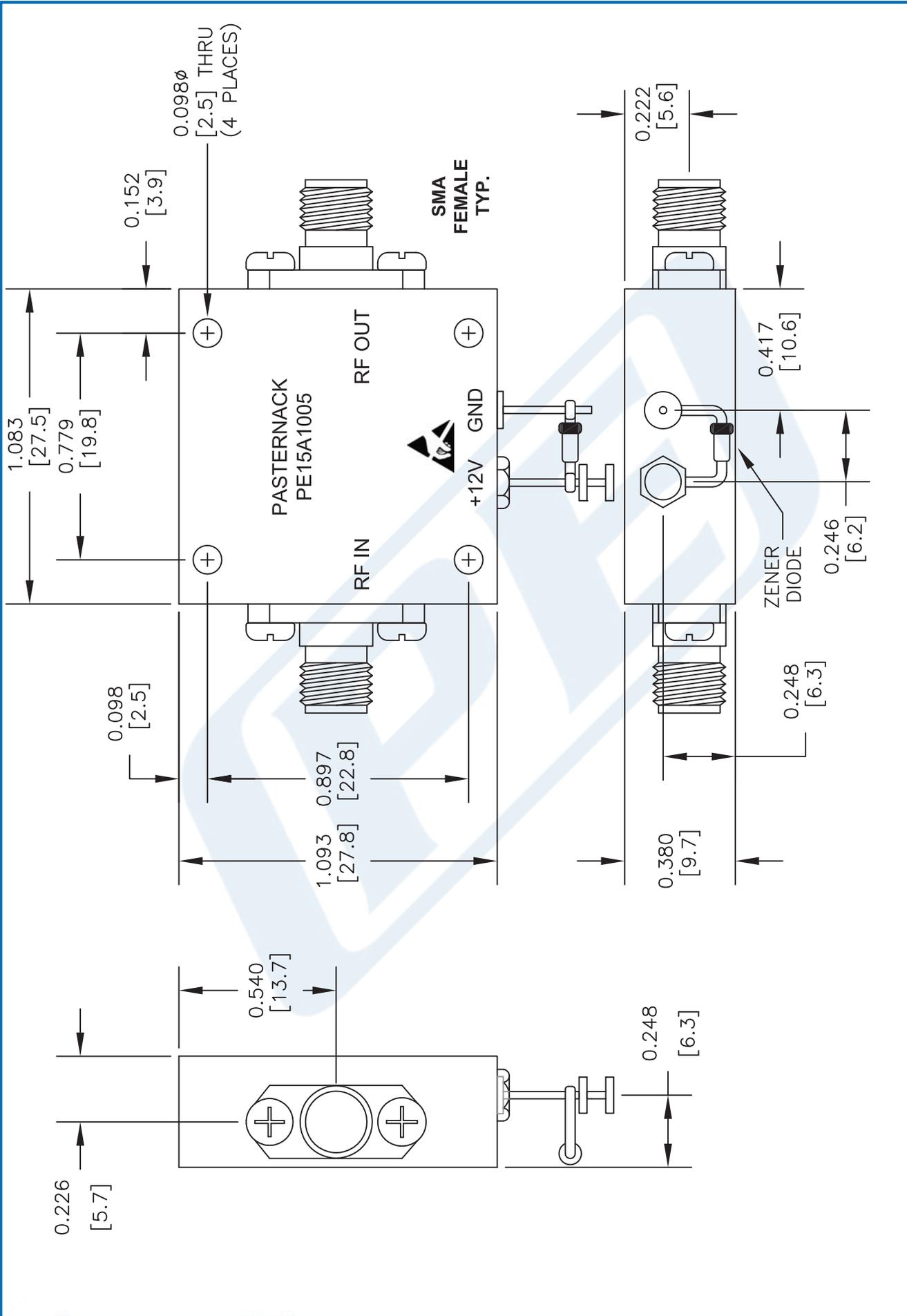
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [40 dB Gain, 1.5 dB NF, 15 dBm P1dB, 1.2 GHz to 1.4 GHz, Low Noise High Gain Amplifier SMA PE15A1005](http://www.pasternack.com/40-db-gain-1.5-db-1.4-ghz-low-noise-high-gain-amplifier-sma-pe15a1005-p.aspx)

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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE15A1005 CAD Drawing

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NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE
PE15A1005

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FSCM NO. 53919

CAD FILE 122214

SCALE N/A

SIZE A

150